

CLAIMS

[1] A bundle of a plurality of selectively permeable polysulfone-based hollow fiber membranes wherein the amount of a hydrophilic polymer eluting from each hollow fiber membrane is not larger than 10 ppm, and wherein the content of the hydrophilic polymer in the outer surface of the hollow fiber membrane is 25 to 50 mass %, characterized in that any of extracted solutions from ten fractions of said bundle, obtained by dividing said bundle at substantially regular intervals along the lengthwise direction, shows a maximum value of smaller than 0.10 in UV absorbance at a wavelength of 220 to 350 nm, with the proviso that said extracted solutions are obtained by the extraction method for tests regulated in the approval manufacturing standards for dialytic artificial kidney devices; and in that the difference between the maximum and the minimum out of the maximum values of UV absorbance of the extracted solutions from the respective fractions is not larger than 0.05.

[2] The bundle according to claim 1, which has substantially no partial sticking of the hollow fiber membranes in the lengthwise direction.

[3] The bundle according to claim 1 or 2, wherein the porosity of the outer surface of the hollow fiber membrane is 8 to 25%.

[4] The bundle according to any one of claims 1 to 3, wherein the mass ratio of the hydrophilic polymer to the polysulfone-based resin is 1 to 20 mass %.

[5] The bundle according to any one of claims 1 to 4, wherein the hydrophilic polymer is poly(vinylpyrrolidone).

[6] The bundle according to any one of claims 1 to 5, wherein the hydrophilic polymer is crosslinked so as to be insoluble in water.

[7] The bundle according to any one of claims 1 to 6, which is used in a blood purifier.

[8] A process for manufacturing a bundle of selectively permeable polysulfone-based hollow fiber membranes, characterized in that the direction of feeding an air to dry the bundle of hollow fiber membranes is inverted alternately at given time intervals.

[9] The process according to claim 8, wherein, in drying the bundle of hollow fiber membranes by feeding an air to said bundle, the capacity of the air to be fed and the drying temperature are decreased in accordance with a decrease in the moisture content of said bundle.

[10] A process for manufacturing a bundle of selectively permeable polysulfone-based hollow fiber membranes, characterized in that the bundle of hollow fiber membranes is dried by irradiation with microwaves under a reduced pressure.

[11] The process according to claim 10, wherein the bundle of hollow fiber membranes is dried under a reduced pressure

of 0.1 to 20 kPa.

[12] The process according to claim 10 or 11, wherein the bundle of hollow fiber membranes is dried by irradiation with microwaves having a low output of not higher than 20 kW.

[13] The process according to any one of claims 10 to 12, wherein the bundle of hollow fiber membranes is dried while the output of microwaves is being decreased in accordance with a decrease in the moisture content of the bundle of hollow fiber membranes.

[14] The process according to any one of claims 10 to 13, wherein the bundle of hollow fiber membranes is dried while the output of microwaves is being sequentially decreased in three steps in accordance with a decrease in the moisture content of the bundle of hollow fiber membranes.

[15] The process according to any one of claims 10 to 14, wherein the bundle of hollow fiber membranes is dried at a temperature of 30 to 90°C.

[16] A process for manufacturing a bundle of selectively permeable polysulfone-based hollow fiber membranes, characterized in that the bundle of hollow fiber membranes is dried by combined drying steps, comprising a step of drying the bundle by irradiation with microwaves under a reduced pressure, and a step of drying the bundle by feeding an air to said bundle while inverting the air-feeding direction alternately at given time intervals.